

Table S5: Results of direct competition experiments used to provide an additional test for epistatic interactions identified from growth rate data. Values of the multiplicative epistasis are shown based on growth rate data and on competition experiments. “ $p(|\epsilon|)$ ” refers to the posterior probability (from competition experiments) that the epistasis ϵ is of the same sign as identified from growth curve data.

Interaction	Media	ϵ (growth rates)	ϵ (selections)	$p(\epsilon)$
<i>rho</i> *- $\Delta visC$	M9t/glu	-0.192	-0.174	> 0.999
<i>rho</i> *- <i>rpsL</i> *	LB	-0.116	-0.553	0.972
<i>rho</i> *- $\Delta aroM$	M9t/AKG	-0.090	-0.056	0.842
<i>rho</i> *- $\Delta yagM$	M9t/glu+STP	0.618	-0.038	0.257